

REPORT ON MACHINERY.

No. 41983

Received at London Office

Date of writing Report 29.4.22 When handed in at Local Office 2.5.22 Port of Glasgow WED. JUN. 7 1922
 No. in Survey held at Glasgow Date, First Survey 12-11-1920 Last Survey 1-6-1922
 Reg. Book. on the S/S Scholar (Number of Visits 54)
 Master Glasgow Built at Glasgow By whom built E. Boumell & Co Tons } Gross 3940
 Engines made at Glasgow By whom made Dunoon & Jackson (1886) when made 1922 Net 2473
 Boilers made at ditto By whom made ditto (1886) when made 1922 When built 1922
 Registered Horse Power 390 Owners Claremont S/S Co (T. J. Harrison Mgrs) Port belonging to Liverpool
 Nom. Horse Power as per Section 28 390 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 25-38 1/2-64" Length of Stroke 48" Revs. per minute 140 Dia. of Screw shaft as per rule 4.9 Material of screw shaft S
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight in the propeller boss Yes If the liner is in more than one length are the joints burned No If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive No If two liners are fitted, is the shaft lapped or protected between the liners No Length of stern bush 5'-0"
 Dia. of Tunnel shaft as per rule 2.52 Dia. of Crank shaft journals as per rule 3.46 Dia. of Crank pin 14" Size of Crank webs 9 1/2 x 9 1/2 Dia. of thrust shaft under collars 13 3/4 Dia. of screw 17.0" Pitch of Screw 17.0" No. of Blades 4 State whether moveable Yes Total surface 90 1/4 sq ft
 No. of Feed pumps 2 Diameter of ditto 3 3/4" Stroke 26" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps WEIRS FEED 7.9 1/2 x 21 10 x 10 1/2 4 1/2 x 7 8 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 at 3 1/2" Boiler Room 2. 3 1/2" In Holds, &c. 2 at 3 1/2 90 2 at 3 1/2 90 2. 1 at 3 1/2 90 3
2 at 3 1/2 90 4 1 at 3 1/2 10 hold with 2 1/2 branch to tunnel. Hall. 2 at 3 1/2 05 bunkum
 No. of Bilge Injections 1 sizes 7" Connected to condenser or to circulating pump condenser Is a separate Donkey Suction fitted in Engine room & size 1 at 3 1/2
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible No
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks with
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line with
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes
 What pipes are carried through the bunkers None How are they protected No
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from U.E.R. Platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Deane & Moore, Spencer, Skinner & Lloyd
 Total Heating Surface of Boilers 6648 sq ft Is Forced Draft fitted No No. and Description of Boilers 3 Single Ended
 Working Pressure 215 Tested by hydraulic pressure to 376 Date of test 20.2.22 No. of Certificate 16022, 16014
 Can each boiler be worked separately Yes Area of fire grate in each boiler 59.8 sq ft No. and Description of Safety Valves to each boiler Double Spring Area of each valve 8.29 sq ft Pressure to which they are adjusted 220 Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2.6" Mean dia. of boilers 16.4 1/2 Length 11-9" Material of shell plates S
 Thickness 1 1/2" Range of tensile strength 29/33 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR
 long. seams TR+DBS Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10 7/16" width of butt straps 1-10 1/8"
 Per centages of strength of longitudinal joint rivets 82.6 Working pressure of shell by rules 221 Size of manhole in shell 16 x 12"
 Size of compensating ring 2.9 x 3.2 1/2 x 1 1/2 No. and Description of Furnaces in each boiler 3 Corrugated Material S Outside diameter 3.11 1/2
 Length of plain part top 3.43 1/4 Thickness of plates bottom 3.43 1/4 Description of longitudinal joint Weld. No. of strengthening rings 1
 Working pressure of furnace by the rules 217 Combustion chamber plates: Material S Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 15/16"
 Pitch of stays to ditto: Sides 9 3/4 x 8 1/2 Back 9 1/2 x 8 1/2 Top 8 1/2 x 8 1/4 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 233
 Material of stays S Area at smallest part 198.266 3/4 sq ft Area supported by each stay 83 sq ft Working pressure by rules 215 End plates in steam space: Material S Thickness 1 1/2" Pitch of stays 2 1/4 x 1 1/2 How are stays secured DN Working pressure by rules 228 Material of stays S
 Area at smallest part 4.24 Area supported by each stay 348 sq ft Working pressure by rules 221 Material of Front plates at bottom S
 Thickness 1 1/2" Material of Lower back plate S Thickness 1" Greatest pitch of stays 14 3/4 x 8 1/8 Working pressure of plate by rules 270
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/8 x 4 1/2 Material of tube plates S Thickness: Front 16/32 Back 15/16 Mean pitch of stays 11 1/2
 Pitch across wide water spaces 14 1/4" Working pressures by rules 235 Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 11 x 1" (2) Length as per rule 40 1/16 Distance apart 83 1/4 Number and pitch of stays in each 4 at 8 1/4
 Working pressure by rules 220 Steam dome: description of joint to shell No % of strength of joint No
 Diameter 1 Thickness of shell plates 1 Material S Description of longitudinal joint Weld. Diam. of rivet holes 1 1/2"
 Pitch of rivets 1 Working pressure of shell by rules 220 Crown plates 1 Thickness 1 How stayed Weld.

SUPERHEATER. Type None fitted Date of Approval of Plan 20.2.22 Tested by Hydraulic Pressure to 376
 Date of Test 20.2.22 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler No
 Diameter of Safety Valve 1 1/2" Pressure to which each is adjusted 220 Is Easing Gear fitted No

If a Report also sent on the Hull of the Ship?

943

8110-619



IS A DONKEY BOILER FITTED? **No**

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Connecting Rod. top end bolts, nuts 2 Connecting Rod bottom end bolts, nuts. 2 Main Bearing bolts. 1 Set of Coupling bolts. 1 Set of Feed. Bilge Pump valves. 1 Set of Piston Rings on Propeller shaft one Propeller Bolt a Quantity of assorted bolts, nuts. Iron of various sizes

ing is a correct description,

JUNSHUIN & JACKSON, Limited.

James Fletcher Director

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1920 Nov 12, 16, 22 Dec 20 1921 Jan 17, 19 Feb 7, 25 Mar 1, 3, 22, 24 Apr 27 May 3, 5 June Aug 11, 22 Sep 2, 7, 9 Oct 5, 25 Nov 22 During erection on board vessel -- 1921 Jan 11, 12, 7, 20, 25, 26, 30 Feb 6, 10, 17, 20, 22, 24, 28 Mar 10, 17, 24, 29 Apr 7, 21, 24, 25 May 2, 3, 9, 30 June Total No. of visits -- 54 --

Is the approved plan of main boiler forwarded herewith **Previously forwarded herewith 4th July 1917** " " " donkey " " "

Dates of Examination of principal parts—Cylinders 1, 2, 2, 2 Slides 6, 2, 2, 2 Covers 2, 2, 1, 2 Pistons 1, 2, 2, 2 Rods 2, 2, 1, 2 Connecting rods 2, 2, 1, 2 Crank shaft 1, 6, 1, 2 Thrust shaft 1, 6, 1, 2 Tunnel shafts 1, 0, 3, 2 Screw shaft 1, 4, 1, 2 Propeller 6, 3, 2, 2 Stern tube 6, 3, 2, 2 Steam pipes tested 2, 5, 4, 2 Engine and boiler seatings 2, 4, 2, 2 Engines holding down bolts 9, 5, 2, 2 Completion of pumping arrangements 2, 4, 4, 2 Boilers fixed 2, 4, 3, 2 Engines tried under steam 3, 0, 5, 2, 2 Completion of fitting sea connections 2, 4, 2, 2 Stern tube 2, 4, 2, 2 Screw shaft and propeller 2, 4, 2, 2 Main boiler safety valves adjusted 2, 5, 2, 2 Thickness of adjusting washers P 7/16 S 3/16 P 1/2 S 7/16 P 1/2 S 1/2

Material of Crank shaft **S** Identification Mark on Do. **LLOYDS** Material of Thrust shaft **S** Identification Mark on Do. **LLOYDS** Material of Tunnel shafts **S** Identification Marks on Do. **S35WGM** Material of Screw shafts **S** Identification Marks on Do. **S35WGM** Material of Steam Pipes **Iron** Test pressure **64 5/16**

Is an installation fitted for burning oil fuel **No** Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with **Yes**

Is this machinery duplicate of a previous case **Yes** If so, state name of vessel **"Traveller" 4th July 1917**

General Remarks (State quality of workmanship, opinions as to class, &c. **These Engines & Boilers have been built under special survey in accordance with the approved plans & the workmanship & material are of good quality & they have been securely fitted on board and tried under steam & found satisfactory. The machinery is eligible in my opinion for the record of L.M.C. 6.22.**

It is submitted that this vessel is eligible for THE RECORD. **+ L.M.C. - 6.22. C.L.**

W. Gordon-Muclun
7/6/22

The amount of Entry Fee ... £ 5 : - : When applied for, Special ... £ 83 : 10 : 5.6.22 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 7.6.22

W. Gordon-Muclun
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 6-JUN 1922**
Assigned **+ L.M.C. 6.22.**



Certificate (if required) to be sent to Glasgow
The Surveyors are requested not to write on or below the space for Committee's Minute.